

## Montana Regional Coalbed Methane Ground-Water Monitoring Program (RDGP Proposal)

Sponsor: \_\_\_\_\_ Big Horn Conservation District

Technical support: \_\_\_\_\_ Montana Bureau of Mines and Geology

Beginning => Ending dates: \_\_\_\_\_ July, 2007 => June, 2009

Costs: \_\_\_\_\_ Grant Request \$157,659      Match: \$84,157

### Goals:

1. Provide ground-water data in support of coalbed methane development decisions
2. Actively involve landowners in data collection for their private wells and springs

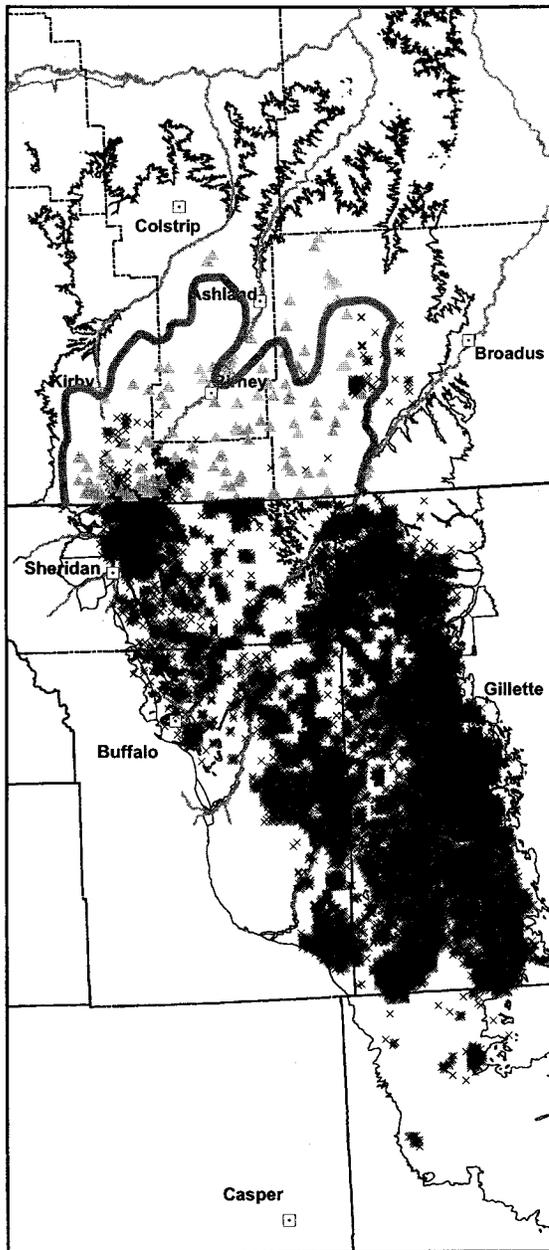
Coalbed methane (CBM) is a new and growing industry, providing jobs and economic growth in southeastern Montana. As of May, 2006 a total of 1,342 permits to drill have been issued in the Montana portion of the Powder River Basin (PRB) and 634 of these are listed as producing. Montana landowners, mineral-estate holders, and agencies are faced with the task of deciding on the location, timing and extent of future coalbed methane development.

Concerns over CBM production stem from the need to withdraw and discharge large volumes of ground water from the coal-seam aquifers in order to decrease hydrostatic pressure, allowing release of methane. Aquifer water levels are lowered within and adjacent to the producing fields for the life of production and for some period of recovery. Production from individual CBM wells is expected to last for up to 10 years; field production will last much longer. Water levels in aquifers may require decades to fully recover.

The monitoring program will document changes or lack of change in ground-water levels and water chemistry within the potential CBM producing area. This project is supported by the county conservation districts, Department of Environmental Quality, Department of Natural Resources and Conservation, and the Federal land management agencies - Bureau of Land Management, and Forest Service. All data will be stored in the Montana Ground-Water Information Center (GWIC) which is available to the public via the Internet.

### This regional monitoring program will:

- Document ground-water conditions at approximately 150 wells and springs (Figure 1)
- Measure changes and recovery related to CBM water production
- Data are presented annually in a region-wide interpretive report
- Directly support the CBM Protection Act (HB 572, 2002 session)
- Fulfill requirements listed in the environmental impact statement (EIS)
- Provide actual scientific data and interpretations for decision makers
- Train and equip landowners to monitor private ground-water supplies



**LEGEND**

- × CBM well or permit
- ▲ MBMG monitoring wells and springs
- Town
- County boundary
- ▭ Powder River Basin (PRB)
- ⤿ Limit of likely CBM development in Montana
- ⋈ Rivers

